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Endeavour's external tank moves to VAB checkout cell

◆ **Shuttle Update:** Spray foam repairs on **Atlantis'** external tank were scheduled to begin Monday. Workers have begun disassembling the special scaffolding built for the foam repair work, to allow for the removal this week of Atlantis' three main engines to inspect for flow liner contamination.

Endeavour's three main engines have been reinstalled after an inspection of the engine flow liners showed no contaminant. Engine leak checks are complete. Technicians are now in the process of completing the engine interface connections and installing the engine heat shields. Nose landing gear door rigging began this week, and preparations are under way for installation of the tunnel adapter, which is located in the midbody between the external airlock and a container used to transport experiments and cargo.

ET-117, the external fuel tank to be used for STS-118,was transported from the barge in the turn basin to the Vehicle Assembly Building on Monday. Today, the tank will be lifted into a checkout cell in high bay No. 2 for processing.

Technicians have installed **Discovery's** remote manipulator system, known as the shuttle arm or RMS. Checkout and servicing of water spray boiler No. 1 is complete. The forward reaction control system was installed.

■ **Reminder —** KSC will mark this year's National Day of Prayer with an hour-long observance beginning 11 a.m. on May 3 in the KSC Training Auditorium. Astronauts Joe Tanner and Jeff Williams will be appearing.

Williams helps orient new station crew members

◆ **ISS Update:** Commander Fyodor Yurchikhin and flight engineers Oleg Kotov and Suni Williams began last week with light duty days after the busy handover operations with the former crew. The station crew participated in several drills to maintain medical and emergency proficiency skills. Yurchikhin and Kotov began sessions throughout the first two weeks of their residence to orient themselves with the station's operating systems. Williams is aiding Expedition 15 with station orientation.

Williams spent some of her off-duty time completing additional test runs for the capillary flow experiment. Capillary flow is the key process used to move fluids in a microgravity environment. The experiment uses the low-gravity environment provided by the station to understand the special dynamics of capillary flow and will aid in the design of fluid transport systems on future spacecraft.

In addition to general station orientation, Yurchikhin and Kotov also performed maintenance work on life-support hardware in the Russian segment. The water separator in the air conditioning system was replaced. The separator dispositions condensate water and air collected from the station's atmosphere that forms through the air conditioner, maintaining optimum humidity levels onboard.

After several months working aboard the International Space Station, Williams will come back to Earth aboard the Space Shuttle Atlantis, targeted for launch June 8. That shuttle mission, STS-117, will carry her successor, astronaut Clay Anderson, to the station to begin his duty as an Expedition 15 flight engineer. The exchange of Anderson and Williams was originally planned for the STS-118 mission, now targeted for launch in August.

■ **NASA News:** On Wednesday and Thursday, teams from around the nation will compete for a total of $250,000 from NASA for an improved astronaut glove design. The Astronaut Glove Challenge, one of NASA's seven Centennial Challenges, will take place at the New England Air Museum at Bradley International Airport in Windsor Locks, Conn. The competition is free and open to the public. It begins May 2 from 3 to 6 p.m. and continues May 3 from 8 a.m. to 6 p.m.

NASA is offering a total of $200,000 for the team that can design and manufacture the best astronaut glove that exceeds minimum requirements. An additional $50,000 goes to the team that best demonstrates mechanical counter pressure gloves.

Centennial Challenges, an element of NASA's Innovative Partnerships Program, promotes technical innovation through prize competitions to make revolutionary advances to support the Vision for Space Exploration and NASA goals. For more information about the Innovative Partnerships Program and Centennial Challenges, visit: **ipp.nasa.gov/cc**.

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